

AN/ALE-55 Fiber-Optic Towed Decoy

Delivering protection against current and future RF missile threats.

The AN/ALE-55 subsystem consists of an on-board signal conditioning assembly and the FOTD. The signal conditioning assembly converts RF frequencies to light for transfer through the fiber-optic line. The system has two modes. In the primary mode, the onboard EW system detects and analyzes a threat, determines the appropriate response, and then sends that response down the line to the FOTD for transmission. The alternative back-up mode is an independent repeater. In this mode, the threat signal is detected, modulated, and then sent down the line to the FOTD. The system can interface with any on-board techniques generator, and can convert any technique. This broad capability enables the system to be installed on a variety of aircraft and to handle both today's range of techniques and any developed to defeat future threats.



BENEFITS

Reliable protection against advanced RF threats

High-powered coherent jamming

Rapid launch

Stable flight across wide speed and altitude variations

Suitable for fighter, bomber and transport aircraft

Proven performance

Interfaces with multiple configurations

Upgradeable for new threats

Affordable

In production

SYSTEM FEATURES**READY NOW**

Jamming across a broad frequency range to defeat advanced RF threats

Dual high powered Traveling Wave Tubes generate enough power to protect a variety of platforms from fighters to large airlift aircraft.

Efficient broad-beam antennas optimize the jamming signal. The antennas employ integral linearization, using detectors built into the antennas, to assure the FOTD operates at optimum power level.

Variable drag fins for aerodynamic stability. The fins open and close in response to air pressure and speed. This ensures stable flight under wide altitude and speed variations, resulting in highly reliable jamming performance over a wide flight envelope while minimizing tension on the fiber-optic line.

Fighter versions of the AN/ALE-55 include a highly robust signal and towline. Tested on multiple aircraft to meet the required deployment and tow envelope.

Uses a state-of-the-art active braking system to maximize system response time and meet the demanding requirements for defeating advanced RF threats. Unlike centrifugal braking, this active braking system enables extremely fast and precise decoy deployment. This means faster deployment speeds, as well as braking options at different lengths. Faster deployment means a second FOTD can be quickly deployed if necessary.

The AN/ALE-55 has been extensively flight-tested on a variety of aircraft, demonstrating robust aerodynamic performance and its ability to jam threats. The AN/ALE-55 is currently in low rate production and scheduled to enter full-rate production in 2007.



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